AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-066

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor(a)amsat.org

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SB SAT @ AMSAT $ANS-066.01
East Coast APRS Satellite Launch 11 March!

AMSAT News Service Bulletin 066.01
>From AMSAT HQ SILVER SPRING, MD.
March 7, 2010
To All RADIO AMATEURS
BID: $ANS-066.01

East Coast APRS Satellite Launch 11 March!
You will be able to see it too over most of the mid-atlantic. I don't see a launch time or any other info yet. Here is what I have received:

A sounding rocket with amateur satellite operating on 144.39 MHZ APRS will rise to 100 miles or so for an 8 minute mission. The rocket (I think) is the Hall 12.067.

The payload is called SOCEM/ADAMASat. There is a computer program and GUI to interface to your PC so you can grab the telemetry live. It is on:
http://ssl.engr.uky.edu/adamasat_free_gui.exe

It's a one shot deal, so I'm gonna have a backup TNC and
HYPERTERM collecting everything.
ADAMASat is the Antenna Deployment and Mono-filament Actuator Satellite.
It's a 2U CubeSat designed by Kentucky Space as part of SOCEM, the
Sub-Orbital CubeSat Experimental Mission.
ADAMASat, which is scheduled to launch on Hall 12.067 out of Wallops Flight Facility on 11 March, will fly in space for roughly 8 minutes performing an engineering experiment and transmitting data down to Earth via APRS packets.

More information on ADAMASat is available at
http://ssl.engr.uky.edu/suborbital/adamasat Kentucky Space is hereby

releasing to the AMSAT-NA community the ADAMASat FREE GUI, a free 32-bit Windows binary for amateur radio operators in the Eastern United States who are interested in tracking ADAMASat on its launch day. The GUI is a standalone application and upon opening it on his/her computer, the HAM will be greeted with a popup window which explains the steps required to track the payload.

All that is needed is a Windows machine, a radio and TNC which can receive on 144.390 MHz, a serial or USB cable, and a suitable location. The GUI parses the APRS packets as they are received, graphing temperatures on-board the payload and reporting status of the mission in real-time. It also includes instructions on e-mailing the packet log to Kentucky Space to aid in post-processing, and a built-in aggregator for the official ADAMASat Twitter RSS feed.

Disclaimer: Kentucky Space provides the GUI "as is" without warranties of any kind, and shall not incur any liability for any damages connected to the use of the GUI.

[ANS thanks Bob, WA4APR, for the above information]

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SB SAT @ AMSAT $ANS-066.02
A new interference threat to the Ham Bands

AMSAT News Service Bulletin 066.02
>From AMSAT HQ SILVER SPRING, MD.
March 7, 2010
To All RADIO AMATEURS
BID: $ANS-066.02

FCC to Permit Rescue Radio Robot in the 430 to 450 MHz Band

Reports initially carried in the February 26, 2010 edition of Amateur Radio NewslineT Report 1698, and on the QRZ.com website say the FCC has issued a waiver of the Part 90 rules to permit a company called Reconrobotics Incorporated to sell a remote controlled security robot that will operate in the 430 to 448 MHz band. This is spectrum that is primary to the Federal Radiolocation Service but also encompasses the Amateur Service weak signal, satellite and repeater subbands.

The waiver permits Reconrobitics to manufacture and sell a device called the Recon Scout. This is described as a device designed for state and local law enforcement and firefighting agencies, and security personnel in critical infrastructure industries. The Recon Scout can be thrown, dropped, or launched into potentially hazardous areas and can provide real-time video to an operator located a safe distance away. Typical applications will include such things as checking a building prior to forced entry, searching vehicle undercarriages for explosives and searching for survivors in a burning structure.

The Recon Scout transmits the analog video signal to the operator on one of three six megahertz channels. These are 430 to 436 MHz, 436 to 442 MHz, and 442 to 448 MHz. Reconrobotics says that multiple channels are necessary in order to avoid interference during incidents where multiple Recon Scouts are in use, but that such situations should be rare.

The company's now approved proposal is that the first unit sold to a responding organization would operate on 442 to 448 MHz. That happens to be where thousands of ham radio repeaters operate. The 436 to

442 MHz version being sold only to entities that already own the 442 to 448 MHz version, and the 430 to 436 MHz version being sold only to entities that already own both of the others.

In approving the waiver, the FCC told Reconrobotics the Recon Scout will have to operate on a secondary basis where it cannot cause interference and is not protected from interference to all Federal users and licensed non-Federal users including radio amateurs. The FCC also warned prospective users that operation of the Recon Scout in an unauthorized manner will subject licensees to Commission enforcement action and license revocation. It also said that widespread improper use of the device could lead the Commission to stop granting or renewing Recon Scout authorizations.

[ANS thanks Amateur Radio NewslineT Report 1698 for the above information]

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SB SAT @ AMSAT $ANS-066.03
SK: Dave Toth, VE3GYQ

AMSAT News Service Bulletin 066.03
>From AMSAT HQ SILVER SPRING, MD.
March 7, 2010
To All RADIO AMATEURS
BID: $ANS-066.03

SK: Dave Toth, VE3GYQ

AMSAT received the sad news of the passing of a friend this week noting the passing of Dr David Toth, VE3GYQ. Dave was the President Emeritus of Tucson Amateur Packet Radio (TAPR) Group. He was an early member of TAPR, a long time supporter of AMSAT and he gave of his time and talents to promote technical endeavors in Amateur Radio. Former AMSAT President Tom Clark, K3IO remembered Dave, "He was always a friend of AMSAT, giving up personal vacations to help with the integration of AO-40 in Orlando. For many years, he was the glue that held TAPR together."

Former AMSAT Board Member, Bob McGwier, N4HY recalled that, "Dave was an important player in the earliest days of packet radio in that he helped promote packet and supported it with on the air hardware. As a board member and President of TAPR, he helped TAPR become the principal support for Open HPSDR, a project to promote the development of hardware and software for software defined radio use by Amateur Radio. He will be sorely missed by all who knew him."

Dr. Toth graduated from the University of Western Ontario Medical School in 1978. He practiced family medicine in London, Ontario but moved to the U.S. in 1993 to began a career in emergency medicine. He was a partner of Premier Health Care Services, in Dayton, Ohio, and worked at Lima Memorial Health System and St. Rita's Medical Center until the time of his illness.

[ANS thanks Tom Clark, K3IO; Bob Bob McGwier, N4HY; Steve Bible, N7HPR; ARRL, TAPR, and Amateur Radio Newsline for the above information]

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SB SAT @ AMSAT $ANS-066.04

Daylight Savings Time

AMSAT News Service Bulletin 066.04
>From AMSAT HQ SILVER SPRING, MD.
March 7, 2010
To All RADIO AMATEURS
BID: $ANS-066.04

Next week, March 14th, our semi-annual time change will occur.
And of course, do we gain or loose an hour? The words Spring ahead and Fall back should come to mind as this is the rule. More modern Atomic Clocks (as they are called)
Set themselves without any manual adjustments. I had a clock that was pre programmed for earlier
DST changes and sent me to work late one Monday morning. Get out your pencils and mark your calendar
For this event. I'm sure the News media will advise you for several days prior to this required
Adjustment to happen, but, someone will not get the word. Please tell that person.
Thank goodness GMT (UTC) stays the same no matter what time of the year it is. Computers too are
Pre programmed but satellite program users should make sure time was corrected properly. We
Wouldn't want you to miss that Sat QSO you planned for all week. Don't forget the 1.26 micro second
Adjustment that the Earthquake in Chile has created.

[ANS thanks ANS Editor for the above information]

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SB SAT @ AMSAT $ANS-066.05
AO-51 Survives Close Encounter With FORMOSAT-3

AMSAT News Service Bulletin 066.05
>From AMSAT HQ SILVER SPRING, MD.
March 7, 2010
To All RADIO AMATEURS
BID: $ANS-066.05

AO-51 Survives Close Encounter With FORMOSAT-3

AMSAT-NA VP Operations, Drew KO4MA, received notification from the US Joint Space Operations Center, located at Vandenberg Air Force Base, California on Sunday, February 28 warning that AO-51 would have a close approach to another satellite, FORMOSAT 3-D, on Monday at 1056 UTC. This occurred over the Eastern US, with many stations on hand capable of receiving telemetry from AO-51 before and after the near miss. Drew said, "The predicted miss distance was 953 meters, which is over 3000 feet overall but the radial difference between the two orbits was only 39 meters."

Steve, W3HF noted, "Given the orbital uncertanties of both satellites, an orbit separated by only 39 meters could mean that distance may become eaten up rather quickly!"

In preparation for the close encounter, Drew shut off the S band transmitter and turned on the digital downlink at 2 watts, with telemetry transmitted every 5 seconds. The next morning, on March 1, Drew was able to post a message that AO-51 was alive and well, "It looks like we are fine. A second warning email this morning from the Air Force called it even closer, but everything was working at LOS this pass."

FORMOSAT-3 is a constellation of satellites launched on April 15, 2006.
It is a joint U.S.-Taiwanese project with major participants including
the University Corporation for Atmospheric Research (UCAR), the National
Science Foundation, the Naval Research Laboratory (NRL), the Air Force
Research Laboratory (AFRL) on the U.S. side and the National Space
Organization (NSPO) on the Taiwanese side.

[ANS thanks AMSAT-NA VP Operations, Drew KO4MA, and Steve, W3HF for the
above information]

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SB SAT @ AMSAT $ANS-066.06
A Self adjusting Orbit Scheme

AMSAT News Service Bulletin 066.06
>From AMSAT HQ SILVER SPRING, MD.
March 7, 2010
To All RADIO AMATEURS
BID: $ANS-066.06

>From the IARU Amateur Satellite Frequency Coordination pages at
http://www.amsat.org.uk/iaru/formal_detail.asp?serial=168

POPACS-RR a 2U cubesat will use self-contained, warm gas, propulsion system
to adjust satellite's initial circular orbit of 450 km to eccentric orbit
with apogee of 1500 km and perigee of 450 km. Demonstrate use of 3D printing
(a.k.a. rapid prototyping) for manufacturing small satellites. Measure flux
of energetic particles in lower Van Allen Belt. Test radiation-hardened
electronic components and high performance solar cells in high radiation
environment over a period of five years. Test radiation hardened components
for a Plug and Play satellite. Proposing a UHF downlink of 9k6 GMSK AX25
packet and also an S Band downlink of BPSK at 9k6 or 38k4. Planning a launch
on the first flight of SpaceX Falcon 1E not earlier than May 2011 with a 45
deg inclination. Will apply for a FCC part 5 Experimental licence for this
project.

IARU Amateur Satellite Frequency Coordination pages
http://www.amsat.org.uk/iaru/

73 Trevor M5AKA

[ANS thanks Trevor, M5AKA, for the above information]

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SB SAT @ AMSAT $ANS-066.7
ARISS Update

AMSAT News Service Bulletin 066.07
>From AMSAT HQ SILVER SPRING, MD.
March 7, 2010
To All RADIO AMATEURS
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Amateur Radio on the International Space Station (ARISS) Status Report
March 1, 2010

1. School Contact

Expedition 22 astronaut Soichi Noguchi, KD5TVP Participated in an Amateur
Radio on the International Space Station (ARISS) contact with Hamasuka

Junior High School in Chigasaki City, Kanagawa, Japan on Thursday, March 4. This is a direct contact and was scheduled for 10:09 UTC. Noguchi is an alumnus of the school.

2. Timothy Creamer Chats with Doncaster Students via ARISS Contact

On Thursday, February 25, Timothy Creamer, KC5WKI spoke with Doncaster Primary School students in Doncaster, Victoria, Australia via an Amateur Radio on the International Space Station (ARISS) contact. The connection was made through telebridge ground station VK4KHZ in Queensland. Two hundred fifty guests attended the event and watched as the students asked nineteen questions of the on-orbit astronaut. The students were involved in many activities leading up to the contact in their Physics, Space, Geography, and English classes. During one such activity, the students researched a place in the solar system and created a short television program for the intergalactic travel show "Postcards."

3. ARISS Annual Report 2009 Posted

The Amateur Radio on the International Space Station (ARISS) Annual Report 2009 has been posted to the AMSAT Web site. See: http://www.amsat.org/amsat/ariss/Papers/Annual%20Reports/ARISS_Annual_Report_2009_Final.pdf

4. ARISS News on Amateur Radio Newsline

The February 26, Amateur Radio Newsline Report 1698 includes one item about the ARISS program. The "Ham Radio in Space" article summarizes the ARISSat Design Review meeting held in Orlando, Florida. See: ftp://ftp.arnewsline.org/quincy/News/news.txt

[ANS thanks Carol, KB3LKI, for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Dee Interdonato, NB2F
nb2f at amsat dot org